

ACKNOWLEDGEMENTS

It is my first and foremost duty to express my profound sense of gratitude to the **Management, Dr.Francis C.Peter**, Vice-Chancellor, **Dr.L.Mahesh Kumar**, Registrar(i/c), **Dr. S. Gunasekaran**, Dean, Research and Development and **Dr.K.Balaji**, Head, Department of Electrical and Electronics Engineering, St. Peter's University, Chennai for their valuable guidance, encouragement, and support during my research work

I sincerely extend my gratitude to my guide, **Dr. B. Justus Rabi**, Principal, Shri Andal Alagar College of Engineering, Chennai, Tamil Nadu for his unwavering support. His wise counsel and suggestions from the budding to blossoming stage proved valuable. It is he, who is the soul, striving force and unifying factor behind this doctoral thesis. Not only his prolific guidance but also his unstinted support and blessings made this possible into a ground reality.

I sincerely thank the Doctoral Committee members, **Dr.R.Ramesh**, Professor, Department of Electrical and Electronics Engineering, Anna University, Chennai and **Dr. C.Sharmeela**, Professor, Department of Electrical and Electronics Engineering, Anna University, Chennai, for providing valuable comments and suggestions during this research work.

Finally, I would like to thank all those who were directly or indirectly helpful in carrying out this research.